

U.S. ENVIRONMENTAL PROTECTION AGENCY
 POLLUTION/SITUATION REPORT
 Mozart Street Mercury Spill - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 Region V

Subject: **POLREP #2**
Mozart Street Mercury Spill

Chicago, IL
Latitude: 41.9023033 Longitude: -87.6869188

To: Mark Johnson, ATSDR
 Sam Borries, U.S. EPA
 Jason El-Zein, U.S. EPA
 Bruce Everetts, Illinois EPA
 John Kim, Illinois EPA
 Valencia Darby, U.S. DOI
 Charlie Gebien, U.S. EPA
 John Glover, U.S. EPA
 Matt Mankowski, U.S. EPA
 Mike Ribordy, U.S. EPA
 Terry Sheahan, Chicago Department of Public Health
 Larry Kyte, USEPA, ORC

From: Verneta Simon / Stavros Emmanouil, OSCs

Date: 12/20/2014

Reporting Period: 12/13/14 to 12/19/14

1. Introduction

1.1 Background

Site Number:	C55F	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	12/15/2014	Start Date:	12/15/2015
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	Complete
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

CERCLA Emergency Response. Mercury spill clean-up at one church and three residences.

1.1.2 Site Description

From December 12, 2014 and December 19, 2014 EPA and START mobilized to a total of four City of

Chicago locations to investigate suspected mercury contamination at the request of the Chicago Department of Public Health.

1.1.2.1 Location

Two of the sites are located south of the Logan Square neighborhood (N Mozart St and W North Ave), one site is located in the Wicker Park neighborhood (N Artesian Ave), and one site is located in the North Lawndale neighborhood (S Central Park Ave) in Chicago, Illinois. In general, each area is a mix of multi-story single-to multi-family homes along with apartment buildings.

1.1.2.2 Description of Threat

Unknown volume of elemental mercury. According to the Agency for Toxic Substances and Disease Registry the nervous system is sensitive to metallic mercury. Exposure to very high levels of metallic mercury vapor can cause brain, kidney, and lung damage and may seriously harm a developing fetus. Exposure to mercury vapor concentrations high enough to produce such serious effects might also cause coughing, chest pains, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation. Exposure to lower levels of airborne mercury for prolonged periods of time would produce more subtle effects, such as irritability, sleep disturbances, excessive shyness, tremors, coordination problems, changes in vision or hearing, and memory problems

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA and START conducted a final assessment of the N Mozart St Residence on December 19, 2014 and San Lucas church (W North Ave) on December 15, 2014. USEPA and START conducted initial assessments of the N Artesian Ave Residence and S Central Park Ave Residence on December 19, 2014. The final and initial assessment results are summarized in the Tables below. USEPA and START did not observe the presence of beads of mercury in any of the locations.

START Final Mercury Vapor Screening Results

Residence on December 19, 2014
N Mozart St, Chicago, IL

Location	Sub-location	BZ (ng/m3)	Floor (ng/m3)	Temp (°F)
1 st Floor	Initial Entry	229	135	78
	Living Room	177	215	
	Dining Room	240	231	
	1 st Bedroom	513	548	
	2 nd Bedroom	Locked	Locked	
	Hallway to Kitchen	274	644	
	Bathroom	322	403	
	Kitchen	352	412	
	Pantry	Locked	Locked	
Basement	Initial Room	785	261	68
	Hallway	439	563	
	Bathroom	Locked	Locked	
	Laundry	352	512	
	Laundry - Drain	379	1,625*	
	Back Bedroom	322	434	

START Final Mercury Vapor Screening Results

San Lucas United Church on December 15, 2014
W North Ave, Chicago, IL

Location	BZ (ng/m3)	Floor (ng/m3)	Temp (°F)
Worship Area – Initial Entry	153	--	72
Worship Area – Floor	154	177	
Worship Area - Carpet	--	194	
Basement – Tables	214	533	

Basement – Serving Counter	--	965	
Basement – Floor	--	811	
Basement – Men's Bathroom	214	343	
Basement – Women's Bathroom	326	412	

START Initial Mercury Vapor Screening Results

Residence on December 19, 2014

N Artesian Ave, Chicago, IL

Location	BZ (ng/m3)	Floor (ng/m3)	Temp (°F)
Initial Entry	6,060	--	68
Living Room	--	4,182	
Middle Room	5,398	7,900	
Bedroom	8,331	8,400	
Kitchen	6,730	5,800	
Bathroom	6,218	5,997	
Back Bedroom	6,303	6,557	

The basement of the residence was locked and therefore could not be screened during the December 19, 2014 initial screening.

START Initial Mercury Vapor Screening Results

Residence on December 19, 2014

S Central Park Ave Residence, Chicago, IL

Location	BZ (ng/m3)	Floor (ng/m3)	Temp (°F)
Initial Entry	6,204	--	68
Living Room	6,060	4,841	
Hallway	5,422	4,960	
Laundry Room	5,170	5,228	
Dining Area	5,807	4,772	
Kitchen	5,799	5,520	
Stairway	6,874	6,700	
Upstairs Hallway	7,297	5,951	
West Bedroom	10,227	+50,000	
Central Bedroom	7,521	7,284	
Master Bedroom	6,811	4,285	

The resident placed a container of mercury on the back porch for disposal during the potential removal action.

The downstairs unit was screened on December 19, 2014. Mercury vapors were below 1,000 ng/m3.

Notes:

* = An elevated reading above 1,000 ng/m3 exists immediately ontop of the floor drain in the laundry room. ERRS could not seal the floor drain because the residence were using the drain as a washing machine and bathroom sink discharge.

°F = Degrees Fahrenheit

BZ = Breathing Zone

ng/m3 = nanograms per cubic meter

Readings observed with a Lumex 915M Mercury Analyzer

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

On December 12, 2014 USEPA and START responded to a City of Chicago Department of Public Health (CDPH) request for assistance in response to a mercury spill at Clemente High School. The individual

potentially responsible for the spill also showed and handled mercury at San Lucas Church (W North Street) and a residence on N Mozart St. Mercury screening levels at both locations were above the USEPA/ATSDR recommended action level for normal occupancy for the most sensitive person.

On December 19, 2014 USEPA and START responded another CDPH request for assistance involving the origin of the mercury for the Clemente High School mercury spill. This request included an additional two residence (N Artesian Ave and S Central Park Ave) where mercury was handled. Mercury screening levels at both locations were above the USEPA/ATSDR recommended action level for normal occupancy for the most sensitive person.

A total of three residence and one Church are included in the Mozart St mercury spill.

2.1.2 Response Actions to Date

From December 12 through 15, 2014 USEPA and START completed mercury spill investigative activities at San Lucas Church on W North Street. San Lucas Church staff heated and vented the first and basement floors of the building in an attempt to remove mercury vapors. In the basement, San Lucas Church staff applied sulfur to the tables and floors to remove mercury vapors. The final mercury screening took place on December 15, 2014. Mercury vapors were below the USEPA/ATSDR recommended action level for normal occupancy for the most sensitive person.

From December 12 through 19, 2014 USEPA, START, and ERRS completed removal action activities at the N Mozart Street residence. ERRS mobilized a mercury vacuum to remove debris in areas with high mercury concentrations. Areas with persistently high mercury concentrations were cleaned with a mercury removal agent (HgX). Headspace readings were collected of clothes in affected areas and disposed of per the USEPA/ATSDR action levels. To remove residual mercury vapors the residence was heated then vented. The final mercury screening took place on December 19, 2014. Mercury concentrations were reduced to below USEPA/ATSDR recommended action level for normal occupancy for the most sensitive person prior to USEPA, START, and ERRS demobilization.

On December 19, 2014, USEPA, START, and Chicago Department of Public Health, mobilized to a residence on N Artesian Ave to perform mercury vapor assessment activities. Mercury vapors in the residence were above USEPA/ATSDR recommended action level for normal occupancy for the most sensitive person. CDPH suggested alternative housing due to elevated mercury levels. The residence could not locate alternative housing.

On December 19, 2014, USEPA, START, and Chicago Department of Public Health, mobilized to a residence on S Central Park Ave to perform mercury vapor assessment activities. Mercury vapors in the residence were above USEPA/ATSDR recommended action level for normal occupancy for the most sensitive person. CDPH suggested alternative housing due to elevated mercury levels. The residence could not locate alternative housing.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

Multiple - Ongoing

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Household item/debris/PPE	Solid	(6) 55-gal drum			Landfill

2.2 Planning Section

2.2.1 Anticipated Activities

On December 22, 2014, USEPA will secure access agreements for the residential properties at N Artesian Ave and S Central Park Ave. If no other resources are available through the home owners insurance or the City of Chicago, a removal action may be conducted at both residences.

2.2.1.1 Planned Response Activities

On December 22, 2014, EPA may deploy START and ERRS to perform a removal action at the residences (see Section 2.2.1).

2.2.1.2 Next Steps

Obtain alternative housing for the residences.

Obtain insurance claim denial form from the residences.

Obtain and official access agreement.

Mobilize START and ERRS to the residences if no other resources are available.

2.2.2 Issues

None at this time.

2.3 Logistics Section

Logistics will be provided by ERRS.

2.4 Finance Section**2.4.1 Narrative**

Finance ceilings and costs for this site have been established as shown below.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$25,000.00	\$8,750.00	\$16,250.00	65.00%
TAT/START	\$15,000.00	\$8,886.00	\$6,114.00	40.76%
Intramural Costs				
Total Site Costs	\$40,000.00	\$17,636.00	\$22,364.00	55.91%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff**2.5.1 Safety Officer**

EPA OSC is the on-site Safety Officer for the response. A health and safety plan was generated and signed by appropriate site personnel. Health and Safety briefings were conducted daily during site operations.

2.5.2 Liaison Officer

NA

2.5.3 Information Officer

NA

3. Participating Entities**3.1 Unified Command****3.2 Cooperating Agencies**

Chicago Fire Department

Agency for Toxic Substance and Disease Control

Chicago Department of Public Health
Chicago School Representatives

4. Personnel On Site

Organization	Position	# Personnel
EPA	OSC	1
Tetra Tech	START	2
ER	ERRS	3

OSC Emmanouil is going on vacation and the site is being transitioned to OSC Verneta Simon.

5. Definition of Terms

CHD = Chicago Health Department
 ng/m³ = nanogram per meters cubed
 START = Superfund Assessment and Response Team
 ATSDR = Agency for Toxic Substances and Disease Registry
 ERRS= Emergency and Rapid Response Services

6. Additional sources of information

6.1 Internet location of additional information/report

Please find additional information on the UEPA OSC Website:
http://www.epaosc.org/site/site_profile.aspx?site_id=9672

6.2 Reporting Schedule

The OSC will issue an additional Polrep on a date to be determined.

7. Situational Reference Materials

Please refer to the Joint EPA / ATSDR Chemical Specific Health Consultation for Action Levels for Elemental Mercury Spills:

http://www.atsdr.cdc.gov/emergency_response/Action_Levels_for_Elemental_Mercury_Spills_2012.pdf